

ABSTRACT

There is provided a floating gate transistor, such as an EEPROM transistor, and method of making the transistor using two masking steps. The method of making a transistor includes patterning a floating gate layer using a first photoresist mask to form a floating gate rail and doping an active area using the floating gate rail as a mask to form source and drain regions in the active area. The method also includes patterning a control gate layer, a control gate dielectric layer, the floating gate rail, a tunnel dielectric layer and the active area using a second photoresist mask to form a control gate, a control gate dielectric, a floating gate, a tunnel dielectric and a channel island region.

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